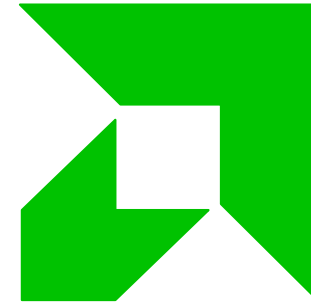


The ÉlanSC300

Silicon Engine for Handheld Computing



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Welcome to the ÉlanSC300 Starter Kit

Press here to continue

(C) Advanced Micro Devices 1996

The ÉlanSC300 Contents

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[Data Sheet](#)

[Programmers Reference](#)

[Publications](#)

[Evaluation & Demo Board](#)

[Software & Utilities](#)

[How to Contact AMD](#)

Click on an item above to read about the ÉlanSC300.

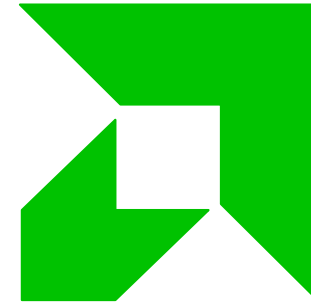
Click on the 'Run Video' button to run a video about the ÉlanSC300.

Run
Video

The ÉlanSC300 Overview

< Main

The ÉlanSC300 silicon engine for handheld computing is a highly integrated, low-voltage, single chip implementation of a high performance 32-bit X86 compatible microprocessor, plus it has the extra logic needed for PC/AT-compatible PCs. It is ideal for handheld and other battery powered computers. It combines an Am386 CPU core with a memory control unit, ISA bus controller, and peripheral control logic, including PS/AT compatible versions of the 146818A Real Time Clock, 8254 timer, 2x8237A DMA controllers, and 2x8259A PICs. In Addition, the ÉlanSC300 engine contains a UART, two PCMCIA (2.0) slots, parallel port, internal LCD graphics controller, and local bus controller.



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A highly integrated processor inherently requires less power. To increase battery life much further, the ÉlanSC300 engine is manufactured in a low power, 3.3-volt submicron CMOS process. Utilizing on-board Phase Lock Loops reduces power to enable micro amps in the suspend state and enables 33-MHZ system speeds from a single 32-KHz watch crystal. The five-state Power Management Unit (PMU) permits complete control from full speed to suspend.

The ÉlanSC300 chip runs software on **THE** open computing standard - the PC/AT architecture. It is both DOS and Windows compatible and supports handhelds operating systems such as WinPad from Microsoft and GEOS from Geoworks.

All of these features and benefits are squeezed into a 208-pin plastic quad flat pack package. Functions that require additional chips on traditional processors are built into the ÉlanSC300 engine. Fewer supporting devices result in smaller, lighter, and more cost-effective handheld product. The ÉlanSC300 engine is the first step in the journey to differentiation, market share, and profitability.

Diagram

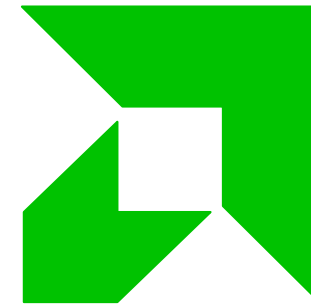
Data Sheet	Prog. Ref.
Eval Board	Help

Hot Spots

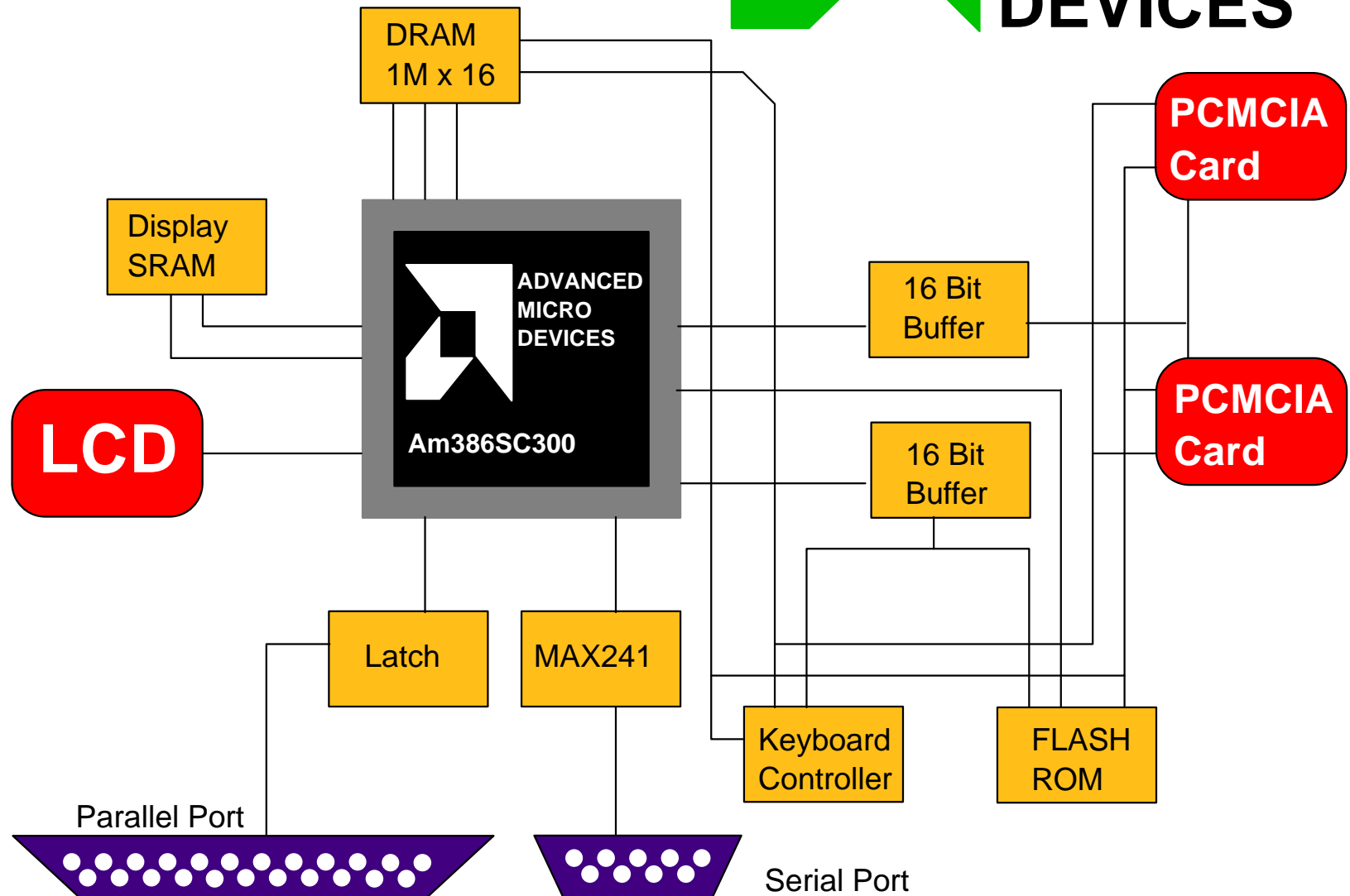
The ÉlanSC300 Overview

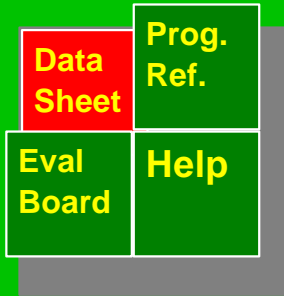


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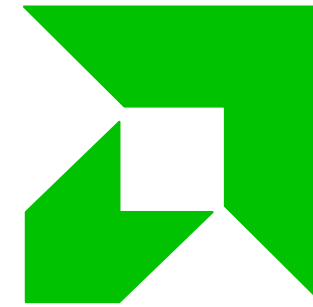


Hot Spots

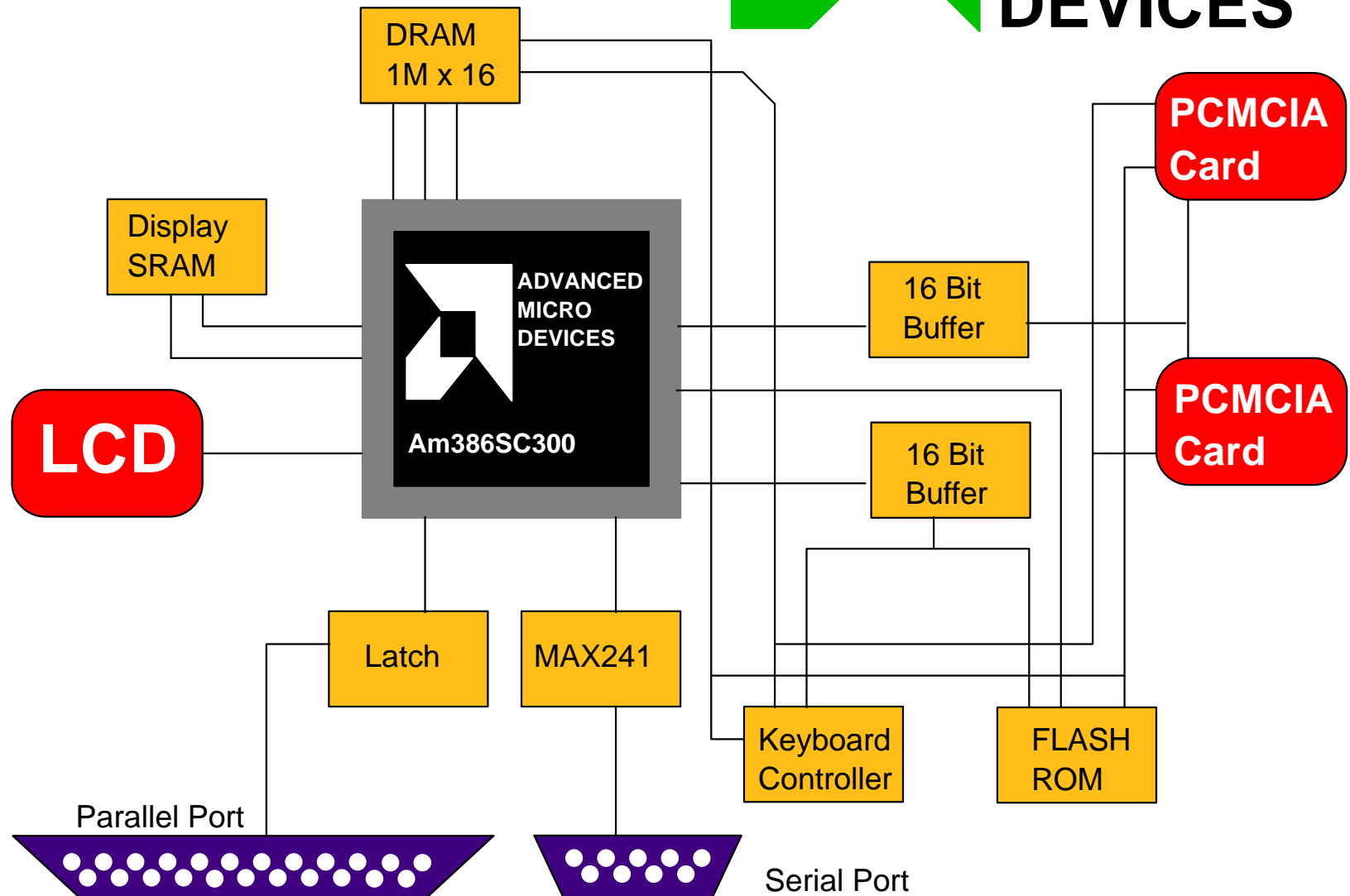
The ÉlanSC300 Overview

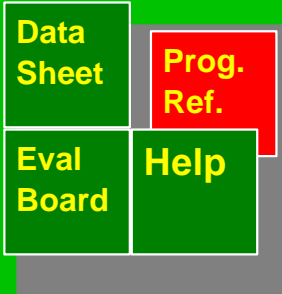


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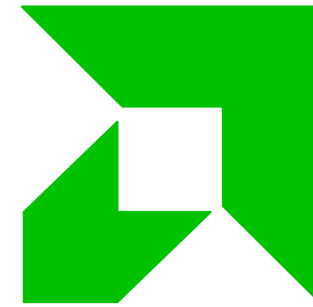


Hot Spots

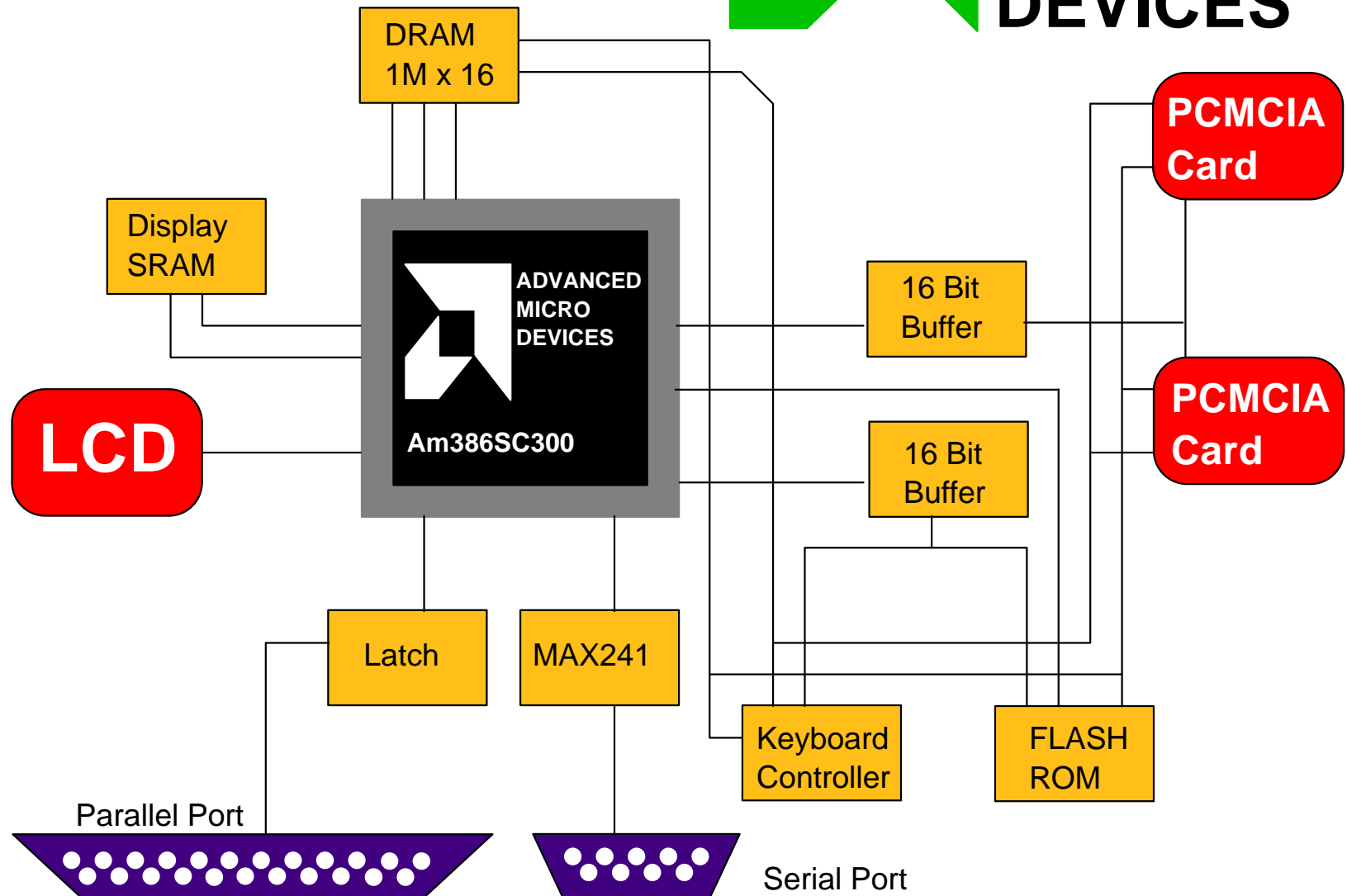
The ÉlanSC300 Overview



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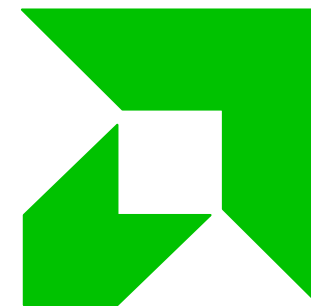




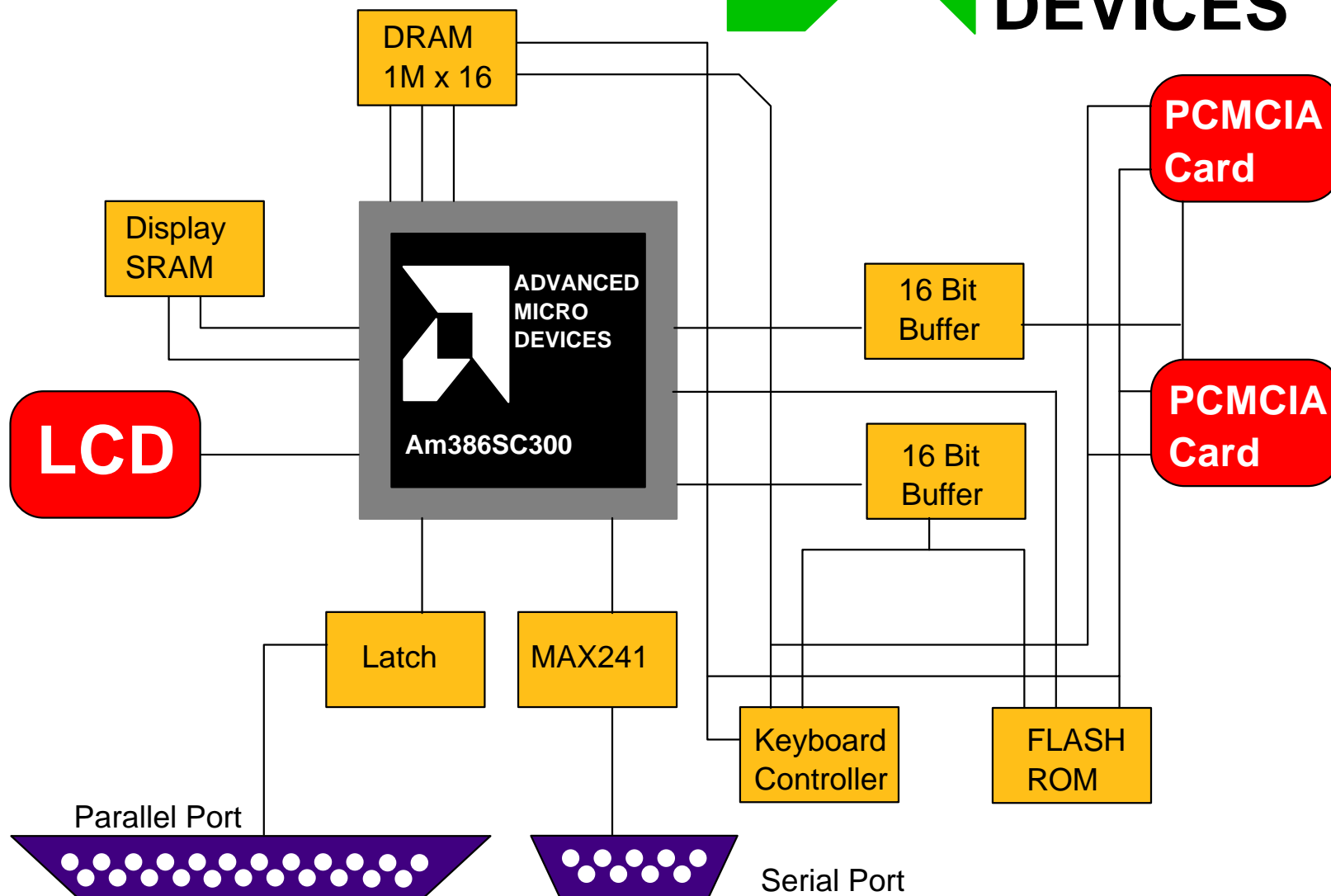
Hot Spots

The ÉlanSC300 Overview

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The ÉlanSC300 Data Sheet



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Sections:

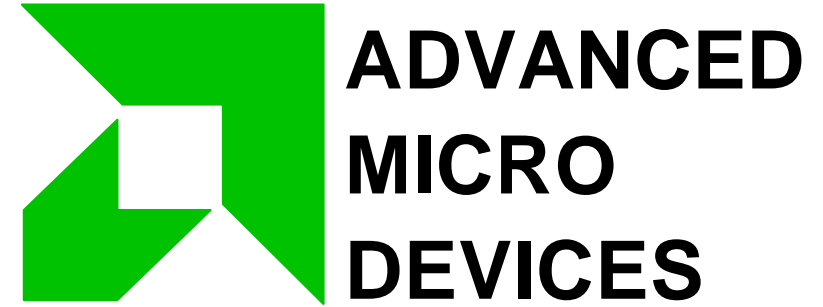
Distinctive Characteristics.
General Description.
Block Diagram.
Ordering Information
Connection Diagram
Pin Designations
Pin Characteristics
Pin Descriptions.
Functional Description.
Alternate Pin Functions.
Physical Dimensions

Alternate Pin Functions Selected
via Firmware
ISA Bus Descriptions
Absolute Maximum Ratings
Derating Curves
Voltage Partitioning
Crystal Specifications.
Loop Filters
AC Switching Test Waveforms
AC Switching Characteristics over
Commercial Operating Range

The ÉlanSC300 Programmers Reference



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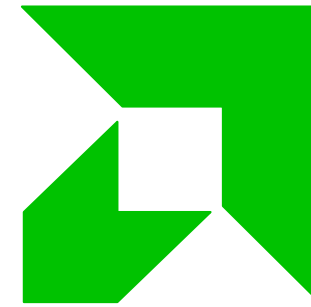
Chapters:

1. Power Management
2. Memory Management and PCMCIA Considerations
3. Video Controller
4. PC/AT Peripheral Registers
5. Configuration Registers

Appendices:

- A. Configuration Index Register Reference
- B. XT Keyboard Interface

AMD Publications



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Élan Am386SC300 Microprocessor Programmer's Reference Manual	#18470A
Élan Am386SC300 Microprocessor Data Sheet	#18514B
Élan Am386SC300 Super	#18345A
Élan family Brochure	#18326A
Élan Hand-held Handout	#19206A
Élan MCD Brochure Revision	#18429B
Am486 Microprocessor Software Users Manual	#18497A

AMD notes (not yet published)

Élan ISA Bus Anomalies
Élan RTC/Micro Power Mode Application
Élan Board Layout Suggestions
Élan RAS Spike During Page Access
Élan PMU Evaluation Utility
ÉLAN Rev B3 Errata / Anomalies / Design Changes
Configuring the ÉlanPC 300's Internal CGA controller for a Specific LCD panel.
Élan MMSVIEW.EXE Memory Management System (MMS) Discovery Utility

More



Other Publications

[Amibios BIOS Release Notes](#)

[Datalight ROM-DOS mini Developer's Kit User's Manual](#)

[General Systems Embedded BIOS & DOS V3.00](#)

[Phoenix Elan BIOS Adaptation Guide](#)

[Phoenix BIOS Errata covering version 1.11 and later](#)

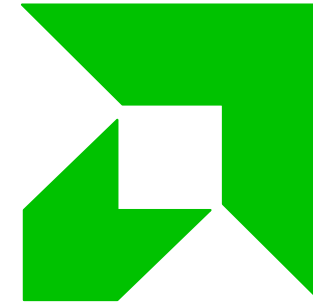
[Phoenix CARD Manager Plus 3.10 User's Manual](#)

[SystemSoft BIOS Version 1.01.23M \(Rev 08\) and CardSoft User's Manual](#)

The ÉlanSC300 Evaluation & Demo Board



Main



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Evaluation Board

Block Diagram

User manual

Schematics

Demonstration Board

Block Diagram

User manual

Schematics



Evaluation Board Schematic Titles

33 MHz RPAK option, MCS16# decode, BAUDOUT opt

BIOS & DOS ROM (Flash or EPROM)

Address Buffering & ROM Connector

Display SRAM & CRT & LCD Connectors

DRAM Main Memory SIMMS

ELAN

Floppy & IDE Interface

ELAN Socket 208 PIN PGA SOCKET

Debug Headers

ISA Bus Connectors

SCP, Keyboard Mouse, & SD Buffers

XTAL, SWITCHES, LOOP FILTER COMPONENTS, SPEAKER

Buffered PCMCIA Connectors

C& T F87000 PCMCIA Buffers

Non- Buffered PCMCIA Connectors

DC/DC Power

Power Switching

Serial & Parallel Port Circuits & Conns

Spare Gates & Super I/O Serial Port

SPARES continued



Disclaimer

These circuit diagrams are included for your interest only, and are not supported by AMD.

The correctness or otherwise of the information in these diagrams must be verified by the you the user.

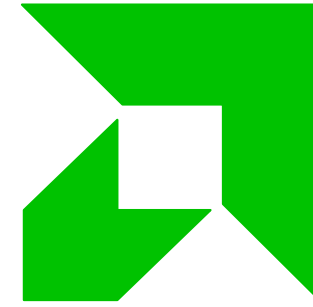
Continue



Hot Spots

The ÉlanSC300
Overview

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Help

Selecting these buttons has the following effect:

Prog.
Ref.

All hot spots on the diagram link to the
Programmers Reference Book.

Data
Sheet

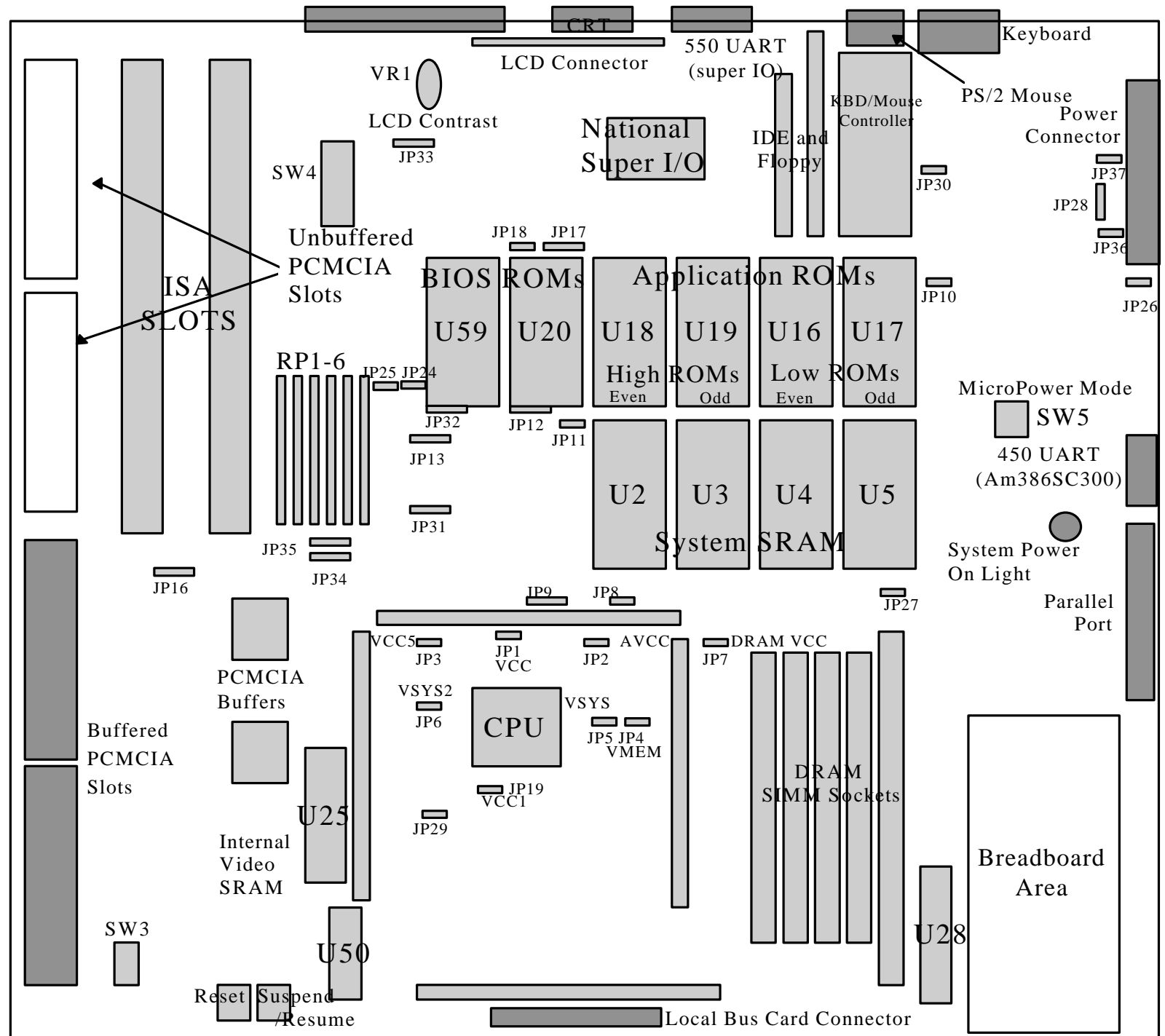
All hot spots on the diagram link to the
Data Sheet

Eval
Board

All hot spots on the diagram link to the
Evaluation Board Handbook

The ÉlanSC300 Evaluation Board Block Diagram

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Amibios

BIOS Release Notes

Datalight

ROM-DOS mini Developer's Kit User's Manual

General Systems

Embedded BIOS & DOS V3.00

Phoenix

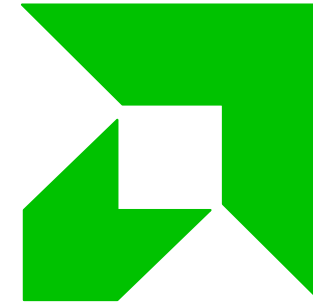
Elan BIOS Adaptation Guide

BIOS Errata covering version 1.11 and later

CARD Manager Plus 3.10 User's Manual

SystemSoft

BIOS Version 1.01.23M (Rev 08) and CardSoft User's Manual

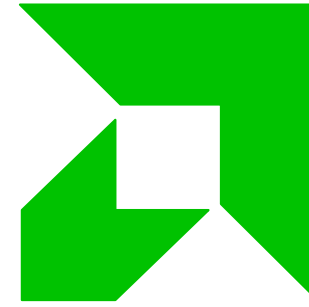


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Advanced Micro Devices, Inc

Advanced Micro Devices, Inc.
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Sunnyvale
CA 94088
USA

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Hong Kong	852-865-4525
Japan	03-3346-7550

Toll Free

USA	(800) 222-9323
France	0590-8621
Germany	0130-813875
Italy	1678-77224

The ÉlanSC300 Evaluation & Demo Board

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Demo Board

Sorry, this information is not yet available in PDF format.

Orcad and postscript files are available on the CDROM in the directory: \source\demo_brd